UNIVERSITY OF TUZLA UNIVERZITET U TUZLI

SYLLABUS

1. . Course title:.:

Microbiology	

2. Abbreviated name of the course/Code

3. Cycle of study

1

4. ECTS credits:

5

5. Type of course:

Mandatory

6. Prerequisites

No prerequisites	

7. Class restricions:

No	

8. Duration / semester

1	2

9. . Weekly contact hoursi and tootal student workload in the course:

Semestar (1)		**Semester (2)**		**(for two-semester course)**	**Worklo ad:**
9.1. Lecture	2			**Classes:**	45,00
9.2. Auditory exercise				**Individual work:**	104,36
9.3.Laboratory/Practice classes	2			**Total:**	149,36

10. Faculty:

Faculty of Pharmacy	

11. Department/study program:

Cosmetology	

13.10.2025

12. . Lecturer:

13. Course aims:

-introduce students to certain areas of the educational, scientific and professional discipline; **-introduce students to the basic features of parasites, fungi and viruses as well as responses of host-man in their presence;** **-introduce them to the importance of these microorganisms and parasites in nature and its impact on human health;** **-teach them to implement the accepted knowledge in practice;** **- teach them to come to a solution of problems in identification of microorganisms through individual or group work;** **-improve the study skills of students for continued learning throughout the year.**	

14. Learning outcomes

-organize work and provide the necessary conditions in the microbiological laboratory;- prepare the materials for sterilization and disinfection and to implement the same- draft and interpretate antibiograms;- make native and stained preparations; microscope under dry and immersing lens;- prepare and do quality control of bacteriological culture media;- perform basic serological techniques: agglutination, precipitation, binding reaction of complements and ELISA); - identify Gram-positive and Gram-negative aerobic bacteria, facultative anaerobic bacteria, coccoid anaerobic and rod-like; -- apply methods for detection and identification of protozoa and helminths; **-apply methods for microscopic identification and cultural identification of fungi (yeasts and dermatophytes).**	

15. Course content:

-Introduction to Microbiology-basic material of causal infection **-Basic principles of disinfection and sterilization** **-Infections and infectious disease** **-Resistance of the organism; immunity - immunology** **-Chemotherapeutics and antibiotics Mechanisms of antibiotic resistance** **-Bacteria: mechanisms of pathogenicity, evidence and treatment of infections.** **-Parasites: mechanisms of pathogenicity, evidence and treatment of infections.** **-Introduction to mycology, causative agents of dermatomycosis** **- Systemic mycoses** **-Viruses: mechanisms of pathogenicity, evidence and treatment of infections.** **-Skin and soft tissue infection** **-Importance and prevention of blood and sexually transmitted diseases diseases** **-Microorganisms of importance in cosmetology**	

16. . Learning methods:

The subject Microbiology consists of 60 hours in total. Classes will be conducted through lectures, seminars and practical exercises as follows: Lectures 2 hours per week, total 30 hours. (Students are required to attend lectures and actively participate in them trough discussion prepared in advance);- Seminars - active participation on the topic either individually or in groups; -Practical exercises two hours per week, a total of 30 hours, the maximum number of student is 15.	

17. Assessment methods:

Knowledge and skills are assessed continuously during the semester and as a final exam. Students can take all forms of knowledge assessment during the semester. **During the first preliminary exam, acquired knowledge and skills in modules 1 to 7 will be assessed, and during the second preliminary exam, acquired knowledge and skills in modules 8 to 13 will be assessed. As part of the preliminary exams, students will also take the practical part of the exam, which includes the content of exercises in the field as well as the preliminary exams.** **Partial exam I includes the assessment of knowledge acquired through modules 1 to 7. The exam is in written form.** **The final exam includes the assessment of knowledge acquired through modules 8 to 13. The exam is in oral form.** **A student who has not successfully fulfilled all obligations during the semester (collected the minimum sum of points based on knowledge assessment in preliminary exams with exercises and a partial exam) takes a**	

cumulative test and a final oral exam, which includes the assessment of knowledge acquired through modules 1-13.
Students who have not passed one of the prescribed forms of assessment shall take the same according to the principle prescribed during the semester. The re-examination is oral and written and takes place according to the previously defined criteria of the final exam. In the re-examination, the student shall be recognized for all parts of the exam passed during the semester.

18. Assessment components:

If the highest rating analogous to 100 points, parts evaluated and the formation of the final mark is presented in the text that follows:
The presence and activities in class lecture and practical exercises 0 to 5 points; team and individual seminars 0 to 5 points; Test I and Test II from 6 to 10 points, partial exam from 10 to 18 points and final exam from 26 to 47 points. To pass the test student needs at least 60% points.
Point scale
-<54 point=5 (five)
-54-64 point = 6 (six)
-65-74 point= 7 (seven)
-75-84 point= 8 (eight)
-85-94 point= 9 (nine)
-95-100 point= 10 (ten)

19. Required reading list:

1. Numanović F, 2013. Medicinska mikrobiologija sa imunologijom i parazitologijom", OFF-SET Tuzla;

20. Additional literature:

1. Karakašević B, 1992. Mikrobiologija i parazitologija; Medicinska knjiga Beograd-Zagreb;
2. Zvizdić Š, 2009. Opšta virusologija, Med. Fak. Sarajevo

21 Web sources:

22. Applicable starting from the academic year

2025/26

23 Adopted in the Faculty/Academy session

13.10.2025